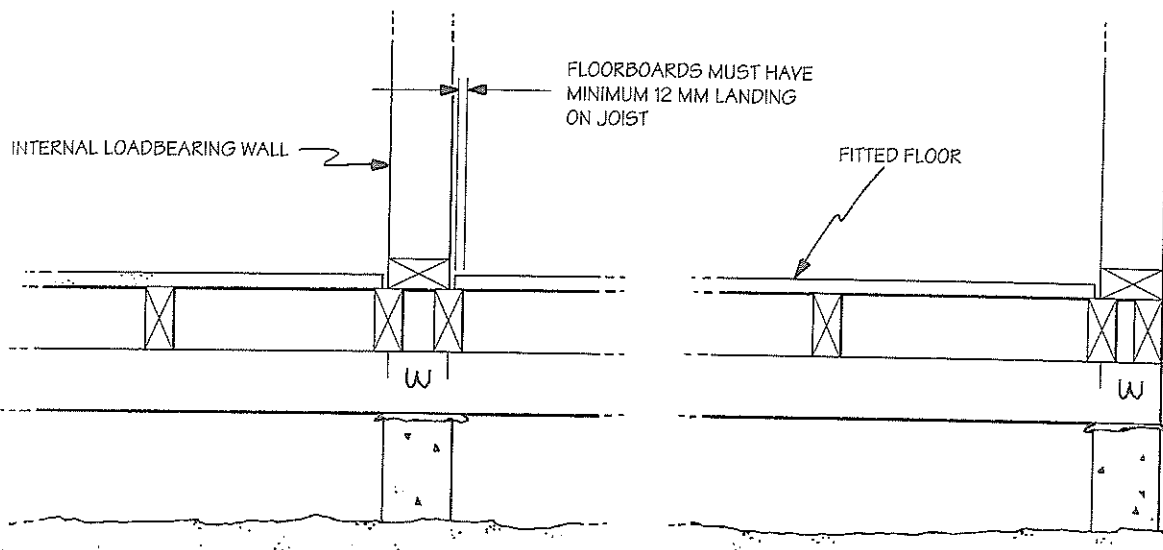


Critical positioning of some floor joists

Prior to placing any floor joists on the bearers, their positions must be set out.

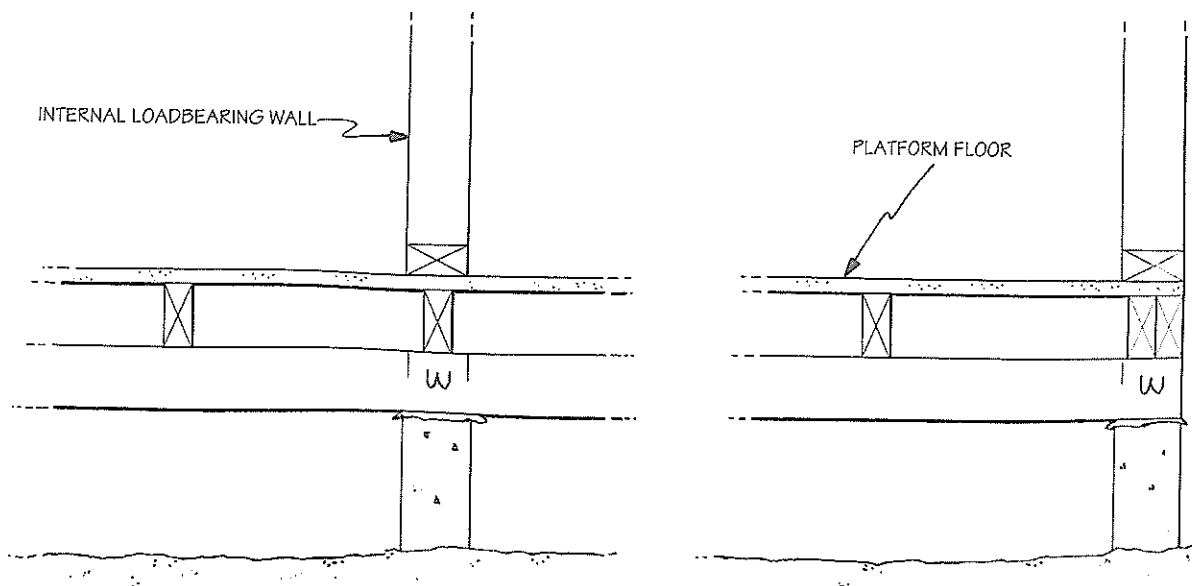
The set-out of floor joists differs for fitted and platform floor systems.

Fitted floor



With a fitted floor system, the joists must be placed so as to carry the bottom plates of the walls and also to provide fixing for the floor boards at the edges of the rooms.

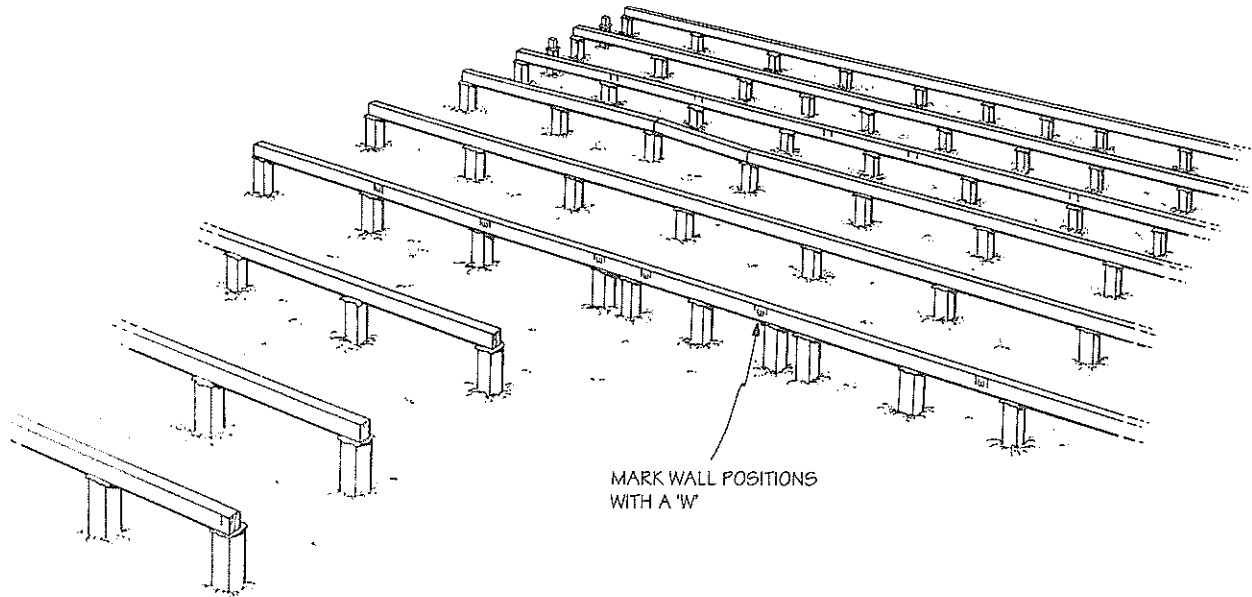
Platform floor



When setting out a platform floor, consideration must be given to placing joists under loadbearing walls, and under the end joints in the sheet flooring. The example home uses particle board sheet flooring 3600 mm long \times 900 mm wide. When these sheets are laid the end joints should be staggered wherever possible. This makes joists every 1800 mm critical in their location, to suit the sheets.

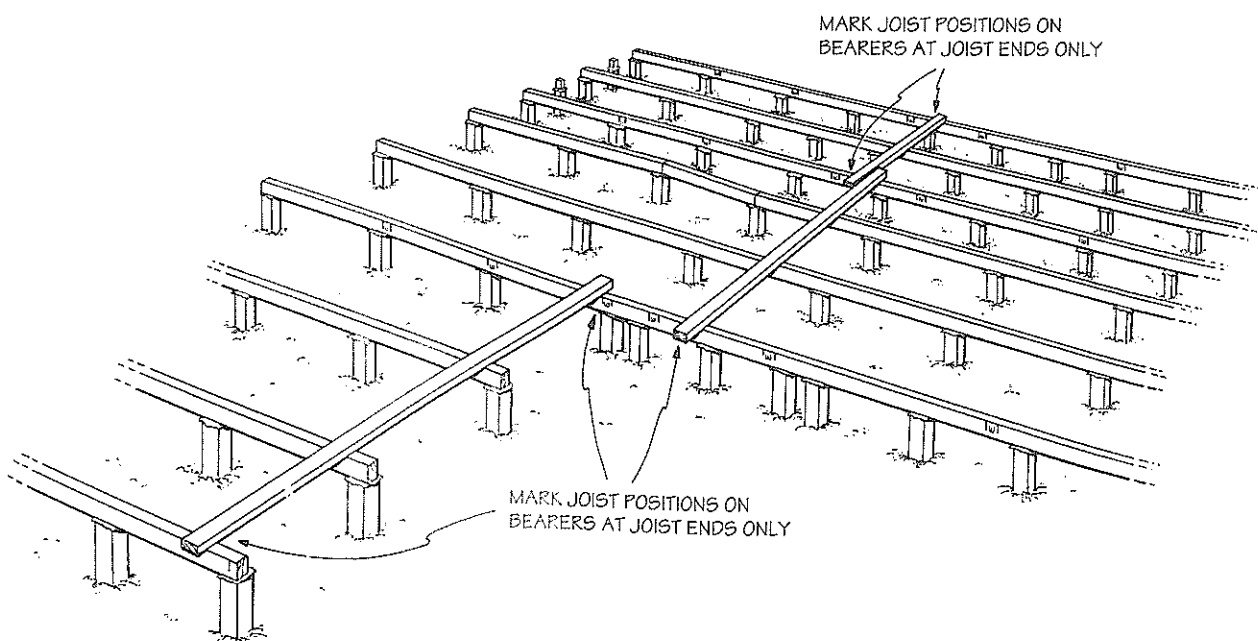
Using the running dimensions, the wall positions can be set out on the side of the outer bearer runs.

Internal loadbearing wall positions also need to be set out on the side of the inside bearers to assist with locating the floor joists required under them. Only mark the wall positions on the bearers which are at (or near) the ends of the walls. All other bearers in between will be marked with a chalk line when marking the joists which are located under the walls.



Setting out floor joists

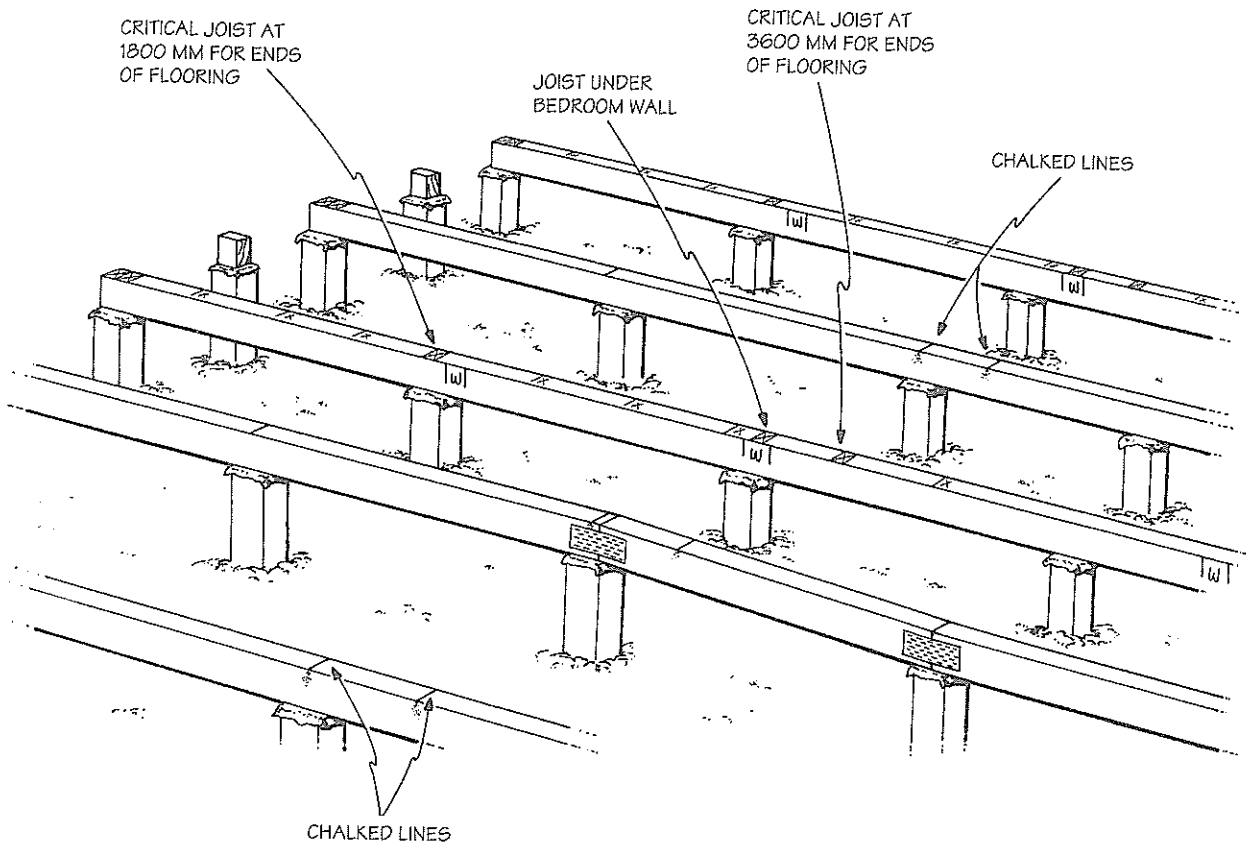
Floor joists are marked on the top edge of the bearers—this saves confusion with the wall marks which are made on the sides of the bearers. To save time marking out the joists it is usual to only mark the joist positions on the bearers at the ends of the joists, this includes the internal bearers where joists will be joined/lapped.



After fixing at these points the joists will be sighted for straight, then nailed to the intermediate bearers.

Mark the remaining floor joists

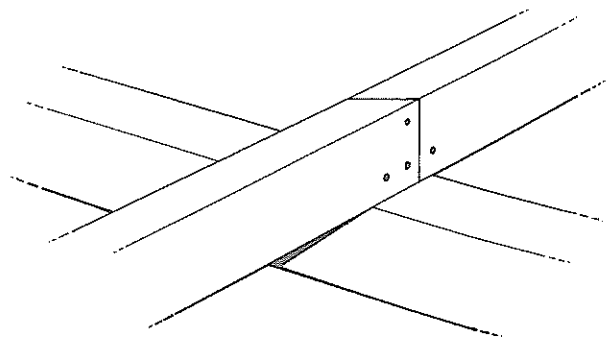
The remaining joists can now be marked at the specified spacing (in this case 450 mm centre to centre) from the special joists at the 1800 mm centres.



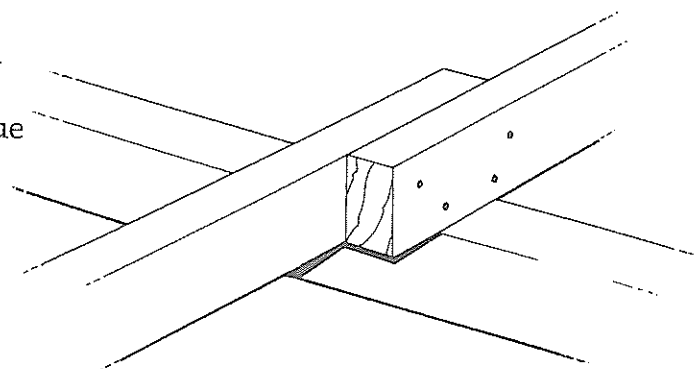
Installing floor joists

There are a number of ways to lap/butt floor joists over internal bearers.

A mitred or square butt joint is used where the joist is located to suit the ends of flooring sheets.

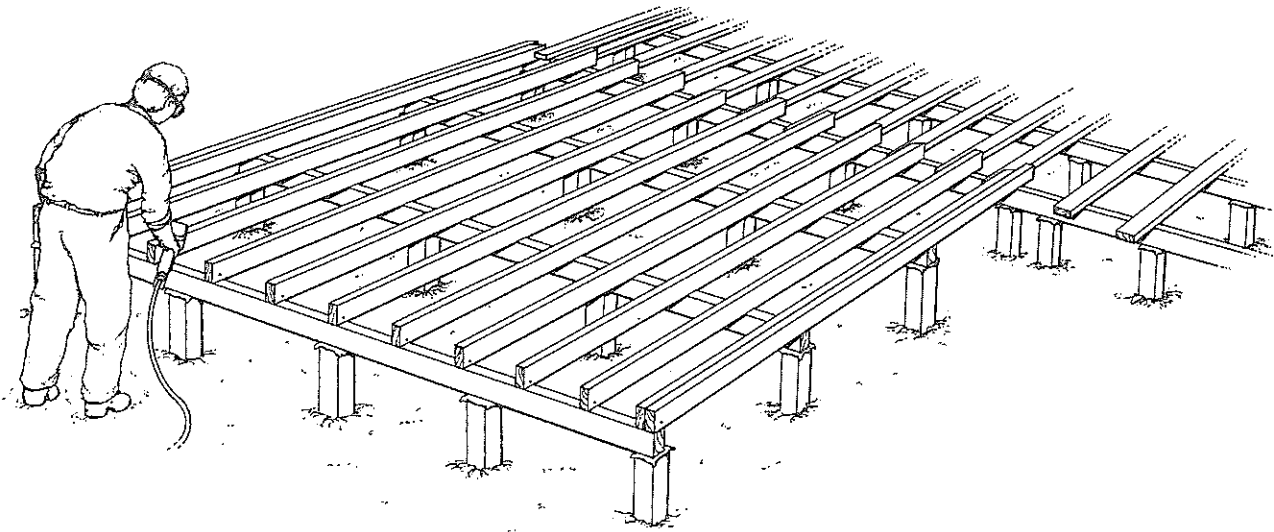


The joists are often lapped when they are not required to continue in a straight line across the job.



Provided the outside bearer runs are straight the remaining joists can be nailed in place with their end flush with the outer face of the outside bearers.

Alternatively, string a line between the ends of the outside joists and install the joists to the line. Be sure not to have any of the joists against the string line or it could be pushed out of line—all joists installed after this would be out of line.



Nail the other, inner end of the joists at the marks on the bearers. Sight the joists to straight and nail at the intermediate bearers. The joists at ends of sheets and under loadbearing walls can be nailed in line with the chalk line marks placed earlier.

Planing joists

Straight edge

A straight edge is any piece of timber or aluminium section with a straight edge on it.

Minor variations in joist depth can be identified using a straight edge.

Place the straight edge at 90° to the joist direction and it will 'rock' on high joists. The high joists can then be planed down using a power planer. Continually turn the straight edge back to the direction of the joist being planed, to make sure that it is being planed straight. Move along the high joists with the straight edge, to check over what distance the joist needs planing. Low joists should be packed up.

